AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) An information recording apparatus comprising:

a light source which emits a recording light for information recording;

a recording waveform data generating unit which generates recording waveform data which is predetermined digital data corresponding to an input recording signal;

a D/A converting unit which D/A-converts the recording waveform data to generate a driving pulse signal; and

a driving unit which drives the light source to emit the recording light based on the driving pulse signal, wherein the recording waveform data is determined in accordance with characteristics of the light source, the driving unit and a combination thereof,

wherein the recording waveform data includes a level for suppressing an overshoot and/or an undershoot at a position corresponding to a position at which a waveform of the recording light emitted from the light source forms the overshoot and/or the undershoot so that the recording waveform

signal data is corrected to suppress the overshoot and/or the undershoot at the position at which the light waveform emitted by the light source has the overshoot and/or undershoot.

2. (original) The information recording apparatus according to claim 1, wherein the recording waveform data generating unit comprises:

a unit which generates a recording strategy signal based on the recording signal and strategy information;

a storing unit which stores predetermined waveform data determined in accordance with the characteristics of the light source, the driving unit and the combination thereof, for pulse waveforms of plural pulse widths; and

a generating unit which obtains the waveform data corresponding to the pulse waveform forming the strategy signal from the storing unit and generates the recording waveform data.

3. (withdrawn) The information recording apparatus according to claim 1, wherein the recording waveform data generating unit comprises:

a storing unit which stores predetermined waveform data determined in accordance with the characteristics of the light source, the driving unit and the combination thereof,

for recording waveform corresponding to plural recording signals; and

a generating unit which obtains waveform data corresponding to the input recording signal from the storing unit and generates the recording waveform data.

4. (currently amended) The information recording apparatus according to claim 2, wherein the storing unit stores the waveform data ~~for each~~ of a recording power which is a power of a recording light emitted from the light source in recording, and the generating unit refers to the storing unit according to a recording power to be utilized and generates the recording waveform data.

5. (canceled)

6. (original) The information recording apparatus according to claim 1, wherein the recording waveform data has a level for canceling a level tilt in a case that a waveform of a recording light emitted from the light source has the level tilt.

7. (currently amended) An information recording method executed by an information recording apparatus which comprises a light source which emits a recording light for

information recording and a driving unit of the light source, comprising:

a process which generates recording waveform data which is predetermined digital data corresponding ~~corresponds~~ to an input recording signal and determined in accordance with characteristics of the light source, the driving unit and a combination thereof;

a process which generates a driving pulse signal by D/A-converting the recording waveform data; and

a process which performs information recording by driving the light source by the driving unit to emit the recording light based on the driving pulse signal,

wherein the recording waveform data includes a level for suppressing an overshoot and/or an undershoot at a position corresponding to a position at which a waveform of the recording light emitted from the light source forms the overshoot and/or the undershoot so that the recording waveform signal data is corrected to suppress the overshoot and/or the undershoot at the position at which the light waveform emitted by the light source has the overshoot and/or undershoot.

8. (withdrawn) An information recording apparatus comprising:

a light source which emits a recording light for information recording;

a strategy signal generating unit which generates a strategy signal which is a pulse waveform signal corresponding to the input recording signal;

a correcting data generating unit which generates correcting data which is predetermined digital data corresponding to an input recording signal;

a D/A converting unit which D/A-converts the correcting data to generate correcting signal which is an analog signal;

an adding unit which adds the strategy signal and the correcting signal to generate a driving pulse signal; and

a driving unit which drives the light source to emit the recording light based on the driving pulse signal, wherein the correcting data is determined in accordance with characteristics of the light source, the driving unit and a combination thereof.

9. (withdrawn) The information recording apparatus according to claim 8, wherein the correcting data includes a level for suppressing an overshoot and/or an undershoot at a position corresponding to a position at which a waveform of a recording light emitted from the light source forms the overshoot and/or the undershoot.

10. (withdrawn) The information recording apparatus according to claim 8, wherein the correcting data has a level for canceling a level tilt in a case that a waveform of a recording light emitted from the light source includes the level tilt.

11. (withdrawn) An information recording method which is executed by an information recording apparatus including a light source which emits a recording light for information recording and a driving unit of the light source, comprising:

a process which generates a strategy signal which is a pulse waveform signal corresponding to an input recording signal;

a process which generates correcting data which corresponds to the input recording signal and is digital data predetermined in accordance with characteristics of the light source, the driving unit and a combination thereof;

a process which D/A-converts the correcting data to generate a correcting signal which is an analog signal;

a process which adds the strategy signal and the correcting signal to generate a driving pulse signal; and

a process which executes information recording by driving the light source to emit the recording light based on the driving pulse signal.

12. (withdrawn) A waveform data generating device comprising:

a unit which obtains set waveform data which is digital data corresponding to a recording signal;

a D/A converting unit which D/A-converts the set waveform data to generate a driving pulse signal;

a driving unit which drives a light source by the driving pulse signal to emit a recording light;

a light detecting unit which receives the recording light and generates a detecting signal;

an A/D converting unit which A/D-converts the detecting signal and generates detected waveform data;

a unit which compares a prepared target waveform data and the detected waveform data to calculate error data;

a unit which updates the set waveform data in a case that the error data is larger than a predetermined allowable error; and

a unit which stores corresponding set waveform data as waveform data corresponding to the recording signal in a case that the error data is smaller than the predetermined allowable error.

13. (withdrawn) A waveform data generating method comprising:

a first process which obtains set waveform data which is digital data corresponding to a recording signal;

a second process which D/A-converts the set waveform data to generate a driving pulse signal;

a third process which drives a light source by the driving pulse signal to emit a recording light;

a fourth process which receives the recording light and generates a detecting signal;

a fifth process which A/D-converts the detecting signal and generates detected waveform data;

a sixth process which compares a prepared target waveform data and the detected waveform data and calculates error data; and

a process which updates the set waveform data and repeats the processes from the first process to the sixth process in a case that the error data is larger than a predetermined allowable error; and

a process which stores corresponding set waveform data as waveform data corresponding to the recording signal in a case that the error data is smaller than the predetermined allowable error.